DOCUMENT RESUME

ED 340 701 SP 033 518

AUTHOR Kemis, Mari R.; And Others
TITLE Teaching Potential and Its Relationship to Multiple Ratings of Student Teaching Performance and Other Factors.
PUB DATE Oct 90
NOTE 17p.; Paper presented at the Annual Meeting of the Midwestern Educational Research Association (Chicago, IL, October 17-20, 1990).
PUB TYPE Speeches/Conference Papers (150) -- Reports - Research/Technical (143)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *Ability Identification; Comparative Analysis; Cooperating Teachers; Elementary Secondary Education; Higher Education; *Interrater Reliability; Longitudinal Studies; *Program Evaluation; *Student Teacher Evaluation; Student Teachers; Student Teacher Supervisors; *Teacher Education Programs
IDENTIFIERS Iowa State University; *Student Teacher Characteristics; *Student Teacher Rating Form

ABSTRACT

This study, part of a 10-year longitudinal study assessing the teacher education program at Iowa State University, examined the performance of student teachers and their teaching potential as judged by multiple raters. University supervisors, cooperating teachers, and student teachers (N=260) rated items on a questionnaire addressing professional qualifications, classroom competencies and techniques, personal qualifications, and potential as future teachers. These data complement and were combined with information on the student teaching experience collected from teacher education students at graduation; as an original part of the longitudinal study, such questions have been asked at graduation, with respondents rating their satisfaction with aspects of student teaching and giving perceptions of their student teaching performance. An analysis of the results suggests that a meaningful relationship exists between student teacher self-ratings of performance and multiple ratings of student teacher characteristics and performance. The three groups agree that quality of preparation in pedagogy, confidence in abilities, and academic indicators are key elements in judging potential of future teachers. A table is appended listing the item means and comparing the three ratings. (LL)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED340701

Teaching Potential and its Relationship to Multiple Ratings of Student Teaching Performance and Other Factors

by

Mari R. Kemis
Richard D. Warren
Harold Dilts

Research Institute for Studies in Education
College of Education
Iowa State University
Ames, Iowa 50011

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

☐ This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

M. Kemis

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

Paper Presented at the Annual Meeting of the
Mid-Western Educational Research Association

October 17-20, 1990
Chicago, Illinois

SP 033 518

BEST COPY AVAILABLE

Teaching Potential and its Relationship to Multiple Ratings of Student Teaching Performance and Other Factors

INTRODUCTION

Student teaching has often been cited as a critical component of teacher preparation and as an experience that is likely to influence the career path of teacher education graduates. While much has been written about student teaching in general, performance as student teachers and potential as teachers as judged by multiple raters are areas needing additional investigation. The purpose of the study was to examine the relationship of teaching potential and three ratings of student teaching performance. A secondary purpose was to examine the relationship of teaching potential and other factors, including characteristics of student teaching, self-rated student teaching performance, teacher preparation, career orientation, and academic indicators.

The competency of teachers, in general, has been a primary concern in recent years. There are a number of ways to address the issue of improving the effectiveness of teachers, one of which is improving the competency of graduates from teacher preparation programs. Examining performance at student teaching and potential as future teachers can provide insights into attracting and retaining effective teachers.

Several studies have examined performance of student teachers. Generally, multiple raters, most often student teachers, cooperating teachers, and university supervisors, have rated student teacher performance similarly (Blanton and Fimian, 1986; Trent and Gilman, 1984; Stolworthy, 1988). Cooperating teachers and university supervisors have tended to give more similar ratings, while student teachers have tended to accord themselves higher self-ratings than have either cooperating teachers or university supervisors (Nelson and Sandness, 1986; Trent and Gilman, 1984) or have "unrealistic optimism" about the characteristics needed for teaching (Weinstein, 1989). Some researchers, however, have noted significant differences in specific areas, including between university supervisors and cooperating teachers (Tanner, 1986; Morin & Lemlech, 1987), between student teachers and university supervisors (Stolworthy, 1987), by student

teacher gender and teaching level (Nelson and Sandness, 1986), and by rater gender (Berkey and Hamilton, 1987).

In recent years, success as a teacher has been examined from many viewpoints. Educational reformers have consistently assumed that academic achievement is a predictor of potential teaching success. However, contradictory research results have been reported. Nelson and Wood (1985), Martens (1987), and Shivley (1982) found that academic indicators, such as SAT scores and grade point averages, were not related to pre-entry and post-entry college screening tests designed to predict probable success or to student teaching competence. Dobry, Murphy, and Schmidt (1985) found that while overall grade point average is related to a standardized test of professional knowledge, neither was related to teacher competence. Conversely, Villeme and Hall (1981) reported that higher ability teacher education graduates (as measured by grade point average) were teaching, wanted to continue teaching, and had positive attitudes related to teaching as a career.

Other factors also have been shown to be related to success. Nelson and Wood (1985) reported that performance in coursework (particularly methods) can reliably predict success. Preparation, including the student teaching experience, appears to have a predictable impact on affective attributes of prospective teachers (Pigge and Marso, 1989). Finally, personality type influenced student teaching performance (Pfeifer, 1983), while self-concept and educational attitudes (Noad, 1979) have been shown to be related to student teaching success.

METHODS

Initiated in the spring semester, 1988, the Student Teacher Evaluation phase of the longitudinal Iowa State University Teacher Education Evaluation Project provides data from multiple raters about the teaching behaviors of student teachers. The student teacher, the cooperating teacher, and the university supervisor rate the student teacher on several characteristics related to the student teaching experience. These characteristics include 15 items related to professional qualifications (3 items), classroom competencies and techniques (5 items), personal qualifications (6 items), and potential as a future

teacher (1 item). These data complement information on the student teaching experience collected from teacher education students at graduation. As an original part of the ten-year longitudinal study, questions related to student teaching have been asked at graduation, with respondents rating their satisfaction with aspects of student teaching and giving perceptions of their student teaching performance. Data from these two phases of the longitudinal study were combined for use in this study. The matched sample consisted of 260 teacher education graduates of Spring 1988, Fall 1988, and Spring 1989 who completed both questionnaires.

Several composites were factorly and conceptually formed from items in both questionnaires. The composites used in the analysis are explained below.

Student Teaching Evaluation Questionnaire

Classroom Competencies Composite. The classroom competencies composite includes five items: knowledge of subject matter, classroom planning, classroom concepts and generalizations, ability to analyze learning problems, and measurement and evaluation.

Personal Qualifications Composite. The personal qualifications composite includes seven items: attitude toward constructive criticism, appearance, health and vitality, voice communication, emotional stability, responsibility and dependability, and interpersonal relationships.

Individual items examined were enthusiasm for teaching, classroom management skills, and teaching potential.

Reliability estimates were calculated for these two composites on the combined Spring 1988 and Fall 1989 data for each of the three groups. For the Classroom Competencies Composite, the alphas ranged from 0.78 to 0.89. For the Personal Qualifications Composite, the alphas ranged from 0.78 to 0.88.

Graduate Questionnaire

Learning Environment Performance Composite. The learning environment performance composite includes seven items rated by the graduate: providing a setting conducive to learning, motivating students, communicating effectively with students, exhibiting a positive self concept, maintaining high expectations for student achievement, incorporating effective questioning techniques, and maintaining high standards for student behavior.

Teaching Behavior Performance Composite. The teaching behavior performance composite includes five items rated by the graduate: demonstrating knowledge of subject matter, monitoring and evaluating student progress and understanding, providing clear, concise explanations and examples, demonstrating effective planning and organization skills, and implementing lesson plans effectively.

The reliability estimates indicated consistency among items for both performance composites. The alpha for the learning environment performance composite was 0.87, while the alpha for the teaching behavior performance composite was 0.81.

RESULTS

Results of the analysis of relationships follow. The correlations between all composite pairs are presented in Table 1. The composites formed from the student teaching characteristics variables were significantly correlated with each other. The learning environment performance composite was significantly related to the classroom competencies and personal qualifications composites for all three groups. The teaching behavior performance composite was related to the multiply-judged classroom competencies composites, as well as to the personal qualifications composites. As expected, both performance composites were highly correlated to student teachers' ratings of classroom competency and personal qualifications. Overall, these significant correlations suggest that a meaningful relationship exists between student teacher self-ratings of performance and multiple ratings of student teaching characteristics and performance.[1]

Teaching potential was highly related to several items, including student teaching performance, student teaching characteristics, job expectations, student teaching satisfaction, program variables, and academic indicators. In Table 2, ratings of teaching potential by the three groups of raters were correlated with variables associated with performance. The three groups' ratings of potential were highly intercorrelated, as expected. High ratings of student teaching performance were related to high ratings of potential by all three groups. Not unexpectedly, student teacher performance ratings were highly correlated with their rating of teaching potential. Enthusiasm for teaching and classroom management skills as rated by all groups also were positively related to potential.

---

[1] Further support for this conclusion is provided in the Appendix. Item means for the three raters were compared and the average inter-item correlations for the paired ratings by the three groups are presented. A brief discussion is included.

TABLE 1

Correlations Between Composites of Student Teaching Characteristics as Rated by Three Groups and Composites of Self-Rated Student Teaching Performance at Graduation

COMPOSITE	A	B	C	D	E	F	G	H
A. Classroom Competencies Composite - US	1.00							
B. Personal Qualifications Composite - US	.71**	1.00						
C. Classroom Competencies Composite - CT	.58**	.48**	1.00					
D. Personal Qualifications Composite - CT	.52**	.57**	.76**	1.00				
E. Classroom Competencies Composite - ST	.32**	.36**	.46**	.34**	1.00			
F. Personal Qualifications Composite - ST	.19**	.45**	.28**	.35**	.62**	1.00		
G. Learning Environment Performance Composite	.15*	.15*	.26**	.19**	.50**	.41**	1.00	
H. Teaching Behavior Performance Composite	.21**	.15*	.26**	.13*	.54**	.34**	.79**	1.00

* Significant at .05 level.
** Significant at .01 level.
US-University Supervisor
CT-Cooperating Teacher
ST-Student Teacher

TABLE 2

Summary of Significant Correlations -- Teaching Potential and Student Teaching Characteristics and Performance for Three Groups

VARIABLES	TEACHING POTENTIAL		
	UNIVERSITY SUPERVISOR	STUDENT TEACHER	COOPERATING TEACHER
Potential - US	1.00		
Potential - ST	.48	1.00	
Potential - CT	.66	.48	1.00
Classroom Competencies Composite - US	.77	.37	.54
Personal Qualifications Composite - US	.74	.44	.52
Classroom Competencies Composite - ST	.41	.59	.41
Personal Qualifications Composite - ST	.34	.52	.31
Classroom Competencies - Composite - CT	.55	.41	.77
Personal Qualifications Composite - CT	.56	.36	.78
Learning Environment Performance Composite	.20	.33	.20
Teaching Behavior Performance Composite	.18	.34	.17
Enthusiasm for teaching - US	.56	.39	.54
Enthusiasm for teaching - ST	.36	.48	.26
Enthusiasm for teaching - CT	.53	.31	.67
Classroom management skills - US	.65	.48	.59
Classroom management skills - ST	.30	.49	.39
Classroom management skills - CT	.52	.41	.73

US-University Supervisor
CT-Cooperating Teacher
ST-Student Teacher

The significant correlations between areas of preparation and career orientation and teaching potential are shown in Table 3. Teaching potential was significantly related to preparation in planning and delivering instruction by all three raters. Some of the career orientation variables (defined as graduates' job expectations) were positively and significantly related. Expectations for challenge and leadership and extrinsic rewards were highly related to ratings of potential by student teachers, while job expectations of service and humanity were related to ratings by university supervisors.

Teaching potential was also related to student teaching satisfaction and program variables and academic indicators (Table 4). A positive reaction to teaching as a career and a high self rating as a future teacher were correlated with high ratings of teaching potential by all three groups. Satisfaction with the cooperating teacher was correlated with the cooperating teachers' rating of potential, while satisfaction with the university supervisor was directly related to the university supervisors' rating of potential. Satisfaction with student teaching location was not related to potential. Ratings of program quality and the decision to prepare to be a teacher again were related to potential by two of the three groups. Although ACT was not related, grade point average and high school rank were correlated with teaching potential. Among the academic indicators, the highest correlation was between graduating grade point average and teaching potential.

SUMMARY AND CONCLUSIONS

The Student Teaching Evaluation phase of the longitudinal evaluation of the teacher education program provides data from multiple raters on student teaching characteristics. University supervisors, cooperating teachers, and student teachers rated items addressing professional qualifications, classroom competencies and techniques, personal qualifications, and potential as a future teacher.

The results of the analysis suggested two major findings. First, the ratings of the classroom competencies and personal qualification composites between pairs of raters were significantly intercorrelated. Self-rated performance at graduation in two areas, learning environment performance and teaching behavior performance, was significantly related to

TABLE 3

Summary of Significant Correlations -- Teaching Potential and Composites for Areas of Preparation and Career Orientation for Three Groups

	TEACHING POTENTIAL		
	UNIVERSITY SUPERVISOR	STUDENT TEACHER	COOPERATING TEACHER
AREAS OF PREPARATION			
Planning and delivering instruction	.13	.24	.16
Interpersonal relationships and individual differences			
Assessing and dealing with learning problems			
Testing and evaluating students			
Developing a teaching style			
CAREER ORIENTATION			
Challenge/Leadership		.18	
Extrinsic Rewards		.14	
Empowerment			
Service/Humanity	.12		

the multiply-judged performance areas of classroom competencies and personal qualifications as rated during student teaching. Overall, these significant correlations suggest that a meaningful relationship exists between student teacher self-ratings of performance and multiple ratings of student teaching characteristics and performance.

Second, ratings of potential were significantly related to several variables. The three groups' ratings of potential were highly intercorrelated. High ratings of student teaching performance were related to high ratings of potential by all three groups. Not unexpectedly, student teacher performance ratings were highly correlated with their

TABLE 4

Summary of Significant Correlations -- Teaching Potential and Selected Variables for Three Groups

VARIABLES	TEACHING POTENTIAL		
	UNIVERSITY SUPERVISOR	STUDENT TEACHER	COOPERATING TEACHER
Satisfaction with cooperating teacher	.14		.26
Satisfaction with university supervisor	.25		
Satisfaction with student teaching location			
Reaction to teaching as a career	.29	.22	.19
Prepare to be a teacher again	.25	.17	
Self rating as future teacher	.29	.39	.21
Rating of program quality	.19		.14
Graduating grade point average	.43	.25	.33
Grade point average at admission to teacher education	.29	.17	.23
High school rank	.25	.16	.19

rating of teaching potential. Enthusiasm for teaching and classroom management skills as rated by all three groups also were positively related to potential. Teaching potential was positively related to teacher preparation in planning and delivering instruction, as well as to some career orientation variables. A positive reaction to teaching as a career and a high self rating as a future teacher were correlated with high ratings of teaching potential by all groups. Satisfaction with the cooperating teacher was correlated with the cooperating teachers' ratings of potential, while satisfaction with the university supervisors was directly related to the university supervisors' ratings of potential. Ratings of program quality and the decision to prepare to be a teacher again were related to potential by two of the three groups. Among the academic indicators, grade point average and high school rank were correlated with teaching potential.

The findings of this study are generally consistent with previous work addressing success as a teacher, particularly when examining personality and preparation factors. The three groups seem to agree that the quality of preparation, especially performance as a student teacher and classroom preparation in pedagogy, confidence in abilities, and academic indicators are key elements in judging potential.

References

Berkey, D. S., & Hamilton, M. (1987, April). Ranked importance of student teacher tasks as perceived by cooperating teachers and university supervisors. Paper presented at the National Convention of the American Alliance for Health, Physical Education, Recreation and Dance, Las Vegas, NV.

Blanton, L. P., & Fimian, M. J. (1986). Perceptions of special education teacher trainee competence. Teacher Education and Special Education, 9(3), 113-122.

Dobry, A. M., Murphy, P. D., & Schmidt, D. M. (1985). Predicting teacher competence. Action in Teacher Education, 7(1-2), 69-74.

Martens, F. L. (1987). Selection of physical education students and success in student teaching. Journal of Teaching in Physical Education, 6, 411-424.

Morin, J., & Lemlech, J. K. (1987). Supervising teachers' and the university supervisor's perceptions of teaching behaviors. Teacher Education Quarterly, 14(4), 84-94.

Nelson, B., & Wood, L. (1985). The competency dilemma. Action in Teacher Education, 7(1-2), 45-47.

Nelson, D., & Sandness, W. (1986, October). Self-evaluation in student teaching: A reanalysis. Paper presented at the Annual Convention of the Mid-Western Educational Research Association, Chicago, IL.

Noad, B. M. (1979). Influence of self-concept and educational attitude on elementary student performance. Educational Research Quarterly, 4(1), 68-75.

Pfeifer, J. (1983, January). The effects of personality on success in student teaching. Paper presented at the National Field Directors Forum of the Annual Meeting of the Association of Teacher Educators, Orlando, FL.

Pigge, F. L., & Marso, R. N. (1989, March). A longitudinal assessment of the affective impact of preservice training on prospective teachers. Paper presented at the Annual Meeting of the American Educational Research Association, San Francisco, CA.

Shipley, W. W. (1982). Let's reevaluate our instruments for selective retention in teacher education. College Student Journal, 16(3), 281-284.

Stolworthy, R. L. (1987). Assessing and interpreting the competency in the preparation of teachers. Topeka: Washburn University. (ERIC Document Reproduction Service ED 290 797).

Stolworthy, R. L. (1988). Preservice teacher education: The application of Scheffe's LSD matrix of multiple comparisons to evaluation efforts. Topeka: Washburn University. (ERIC Document Reproduction Service ED 299 250).

Tanner, D. E. (1986, February). Do university supervisors, cooperating teachers, and student teachers agree about the student teacher's performance? Paper presented at the annual meeting of the Association of Teacher Educators, Atlanta, GA.

Trent, J. H., & Gilman, R. A. (1984, October). An adaptation of the teacher performance assessment instruments (TPAI) in a teacher preparation program in northern Nevada. Paper presented at the Annual Meeting of the Northern Rocky Mountain Educational Research Association, Jackson Hole, WY.

Villeme, M. B., & Hall, B. W. (1981). Higher ability education graduates: Do they enter and stay in teaching? Teacher Educator, 19(3), 11-15.

Weinstein, C. S. (1989). Teacher education students' preconceptions of teaching. Journal of Teacher Education, 40(2), 53-60.

c:\ws5\reports\mwera.mrk

Appendix

The item means for the three raters were compared (Table A-1). Differences in the means were analyzed, with the significance level presented. The average inter-item correlations for the paired ratings by the three groups are also presented in the table.

There were significant mean differences in the ratings by the three groups for six characteristics. An examination of the means shows that the university supervisors tended to rate attitude toward constructive criticism (US=1.48, ST=1.25, CT=1.35) and measurement and evaluation (US=1.80, ST=1.58, CT=1.63) more negatively than did the other two groups. It appears that the university supervisors rated classroom management significantly more positive than did the other two groups (US=1.83, ST=1.91, CT=1.99). The student teachers tended to rate their appearance more positively than did either the university supervisors or the cooperating teachers (US=1.33, ST=1.14, CT=1.24); they also rated responsibility and dependability as more positive than did the cooperating teachers (ST=1.27, CT=1.43) and were closer to ratings of the university supervisors (1.36). The student teachers also tended to rate their potential as future teachers more positively than did the university supervisors or the cooperating teachers (ST=1.49, US=1.63, CT=1.59).

The average inter-item correlation indicates that, for the most part, there is some agreement in the ratings of student teaching characteristics by the three groups. The correlations ranged from 0.19 for measurement and evaluation to 0.53 for teaching potential. Other items with high correlations include enthusiasm for teaching (r=0.52), classroom management (0.48), responsibility and dependability (0.44), classroom planning (0.41), and interpersonal relationships (0.40). If one of the commonly used methods for computing interrater reliability (Spearman-Brown formula) is followed, the reliability for teaching potential is 0.77.

TABLE A-1

Ratings of Student Teaching Performance - All Raters (Spring 88 through Spring 89)

CHARACTERISTICS	MEANS[a] UNIVERSITY SUPERVISOR	STUDENT TEACHER	COOPERATING TEACHER	N	SIGNIF-ICANCE	AVG INTER-CORR
Knowledge of subject matter	1.79	1.88	1.83	281	NS	0.35
Enthusiasm for teaching	1.41	1.35	1.38	282	NS	0.52
Attitude toward criticism	1.48	1.25	1.35	283	**	0.34
Classroom planning	1.80	1.76	1.78	279	NS	0.41
Concepts and generalizations	1.91	1.83	1.85	269	NS	0.35
Ability to analyze learning problems	1.80	1.72	1.81	274	NS	0.37
Classroom management	1.83	1.91	1.99	278	*	0.48
Measurement and evaluation	1.80	1.58	1.63	189	**	0.19
Appearance	1.33	1.14	1.24	282	**	0.36
Health/vitality	1.37	1.40	1.47	281	NS	0.32
Voice communication	1.65	1.70	1.77	282	NS	0.32
Emotional stability	1.40	1.36	1.40	281	NS	0.31
Responsibility/ dependability	1.36	1.27	1.43	283	**	0.44
Interpersonal relationships	1.30	1.35	1.38	253	NS	0.40
Teaching potential	1.63	1.49	1.59	249	**	0.53

* Significant at 0.05 level.

** Significant at 0.01 level.

a The rating scales differ for each question. A 1 rating indicates a generally positive rating, while a 5 rating is more negative.